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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/058,830

01/30/2002

Nir Cohen

82369

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20529

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01/17/2006

NATH & ASSOCIATES

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Alexandria, VA 22314

EXAMINER

DANIELS MENDEZ, PHYLLIS A

ART UNIT

PAPER NUMBER

3629

DATE MAILED: 01/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/058,830	Applicant(s) COHEN ET AL.	
	Examiner Phyllis A. Daniels-Mendez	Art Unit 3629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. The drawings are objected to because Fig. 2 is not labeled properly. Item ID and Location ID are discussed within the specification, but this has not been indicated in the drawing (See Fig. 2). Corrected drawing sheets in compliance with 37 CFR 1.21(d) are required in reply to the Office action to avoid abandonment of the application.

Therefore, the Examiner is unable to validate the values located within those columns.

The specification does not indicate how the Date and the Value column information were generated. Figure 5 is objected to because the description of the table is not complete. The specification only explains the last column of the table. Further explanation is needed to evaluate the values located within the chart. For example, the headers on the chart have not been indicated within the specification.

Specification

2. 35 U.S.C. 112, first paragraph, requires the specification to be written in "full, clear, concise, and exact terms." The specification is replete with terms, which are not clear, concise and exact. The specification should be revised carefully in order to comply with 35 U.S.C. 112, first paragraph. Examples of some unclear, inexact or verbose terms used in the specification are: Inconsistencies exist within the specification when it comes to the use of "single top level node (00)". In the section titled "Background of the Invention" the term single top-level node (00) is used. In the section titled

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"Summary of the Invention" the term single top-level node (0,0) is used. Summary of the Invention (Section (c)): Sentence should be reworded. For example, simultaneously computing demand forecast....computer servers of the at least two computer servers.

Claim Objections

3. Claim 1 (c) is objected to because of the language "simultaneously computing demand forecast....computer servers of the at least two computer servers. The Examiner is not sure what the applicant meant by this sentence. Therefore, it will be interpreted as "simultaneously computing demand forecast information for at least two branches of the demand forecast tree on two different computer servers.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1 - 8 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim1: This disclosure fails to state or teach one who is skilled in the art the calculation of time series of observations. No working examples disclosing the necessary parameters have been provided. Without this disclosure, one skilled in the art cannot practice the invention without undue experimentation because of the uncertainty of the time series of observations calculation. The disclosure further states that a database and at least two servers will be used to calculate at least two branches of the forecast demand tree.

Claims 2 and 6: It is unclear how the tasks are being allocated. There is one figure (i.e. Figure5) that shows the allocation of branches into to tasks. This example fails to disclose how the calculations are performed. It further fails to disclose how a single tree becomes 3 equal trees. Without these disclosures, one skilled in the art cannot practice the invention without undue experimentation because of the parameters in the process.

Claim 3: The algorithm that is stated does not provide enough information to determine how to calculate its final result.

Claims 4 and 8: It is unclear how the number of bottom level nodes of the branches being calculated. The disclosure indicates that the bottom level nodes of the branch are all equal. The process involved in their calculation has not been explained. Without this disclosure, one skilled in the art cannot practice the

invention without undue experimentation because an algorithm has not been provided.

Claim 5: It is unclear how the forecast engine will be used simultaneously. For instance, refer to section (b) of the claim: a forecast engine including two or more computer servers each independently capable of computing demand forecast information for an entire branch of the demand forecast tree [for simultaneously computing demand forecast information for at least two branches of the demand forecast tree on two different computer servers of the at least two computer servers]. The brackets [] indicate the area of confusion. Without further explanation, one skilled in the art cannot practice the invention without undue experimentation because an explanation is required to understand how two computer servers operate simultaneously.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 3 and 7 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. See MPEP 2105.

The basis of this rejection is set forth in a three-prong test of:

(1) whether the invention produces a useful, concrete, and tangible result. The present invention fails the “useful, concrete, tangible” result test. For an invention to be “useful” it must satisfy the utility requirement of section 101. The PTO’s official interpretation of the utility requirement provides that the utility of an invention has to be (i) specific, (ii) substantial and (iii) credible. MPEP 2107.

In the present case the Applicant has indicated that in order to determine the number of tasks will be equal to the product of the number of computer servers available for computing demand forecast information and a user entered value.

Another consideration is whether the invention produces a “concrete” result. Usually, this question arises when a result cannot be assured. In other words, the process must have a result that can be substantially repeatable or the process must substantially produce the same result again. In re Swartz, 232 F.3d 862, 864 (Fed. Cir. 2000) (where asserted result produced by the claimed invention is “irreproducible” claim should be rejected under section 101. The opposite of “concrete” is unrepeatable or unpredictable. Resolving this question is dependent on the level of skill in the art. For example, if the claimed invention is for a process which requires a particular skill, to determine whether that process is substantially repeatable will necessarily require a determination of the level of skill of the ordinary artisan in that field. An appropriate rejection under 35 U.S.C. § 101 should be accompanied by a lack of enablement rejection under 35 U.S.C. § 112, paragraph 1, because the invention cannot operate as intended without undue experimentation.

In the present Application many factors exist that may be considered in determining the multiplier (M) that will be used in the calculation of the tasks. Therefore, any person who tried to use the present disclosure would come up with a different result, which is unpredictable.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 – 2 and 4 – 5 are rejected under 35 U.S.C. 102 e(1) as being anticipated by Billet et al. (US 2003/0036890).

With respect to **Claim 1**: Billet discloses a method and system for forecasting using pattern recognition and extension software, comprising the steps of:

a. A data reader, which facilitates the input of data from one or more databases. The data reader may also utilize web-based software to allow access

to data from remote servers over a network, such as the Internet (Column 3, Section [0030]).

b. The optimizer module of the method assists the users in improving upon the forecasted results. The optimizer contains a built in simulator. This simulator provides user with an opportunity to perform "what if" analysis. The user has the ability to change values of various parameters (theoretically) and see how these changes affect the forecasted results (Column 3, Section [0035]).

c. The data reader facilitates the input of data from popular. The data reader can be equipped with web-enabled software of the kind known in the field to access data from remote servers via a network such as the Internet or a private network (Column 6, Section [0081]).

With respect to **Claim 2**: Billett discloses that the data reader is used for accessing data from remote servers. It can be concluded that this server is dedicated to the data reader (Column 3, Section [0030]).

With respect to **Claim 4**: Billett discloses that his optimizer module assists in the improvement of forecasted results (Column 3, Section [0035]).

With respect to **Claim 5**: Billett discloses that there have been efforts to express causative forces and effects numerically. Indeed, much of mathematics is based on the premise that effects can be expressed as functions of their causes. Thus, the simple formula $f(x)=Kx$ expresses the concept that a given outcome is a function of variable "x" and constant "K." More particularly, it is equal to "K" multiplied times "x." More complex equations can be utilized to express an

outcome as a more complicated function of a cause or as a function of additional causative factors, including a time variable (Column 1, Section [0003]). Billet further discloses that the forecaster module utilizes the iterative generator to produce predictions of future events. Such predictions can be short-term or long-term or both. As additional events that are the subject of the predictive system occur, the historic database can be updated to tune the system for better future predictions (Column 3, Section [0033]).

With respect to **Claim 6**: Billett discloses that the data reader is used for accessing data from remote servers. It can be concluded that this server is dedicated to the data reader (Column 3, Section [0030]).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Billet (UA#2003/0036890) in view of Bowman-Amuah (US# 2002/0133328).

For claims 1-8 Billet discloses using symbolic classifiers are also known as rule-induction programs or decision-tree generators. They use statistical algorithms or machine-learning algorithms such as ID3, C4.5, AC2, CART, CHAIRd, CN2, or

modifications of these algorithms. Symbolic classifiers split a database into classes that differ as much as possible in their relation to a selected output. That is, the tool partitions a database according to the results of statistical tests conducted on an output by the algorithm instead of by the user (US# 2003/0036890, Section [0014]). He further discloses that some of these tools can also generate graphic **decision trees**, which display a summary of significant patterns and relationships in the data (US# 2003/0036890, Section [0018]). He further discloses that the data reader 14 facilitates the input of data from popular databases such as ORACLE, SYSDBASE or INGRES brand. It is desired that the input historic data be set forth in a FOXPRO brand or flat data file for use by the system. The data reader can be equipped with web-enabled software of the kind known in the field to access data from remote **servers** via a network such as the Internet or a private network. The software may include a graphical user interface that allows the user to specify the fields for which the production models are required (US# 2003/0036890, Section [0081]).

Bowman-Amuah discloses that data flow in today's network typically follows the **client-server** computing model. This is where many clients are all transferring data into and out of one or more network **servers**. Clients do not normally talk to each other; they share data by using the server. While this type of data exchange will continue, much more of the information flow in tomorrow's networks will be peer-to-peer. Since the ultimate goal is a distributed computing environment where all systems act as both the client and server, more of the data flow will follow a peer-to-peer model. The network will be required to provide more direct access to all peers wishing to use high-

performance backbone internets connecting, for example, the desktop computers (US# 2002/0133328, Section [0047]). He further discloses that another desirable characteristic for a data mining classifier is its short training time, i.e., the ability to construct the class descriptions from the training set quickly. As a result, the methods of the invention are based on a **decision-tree** classifier. **Decision trees** are highly developed techniques for partitioning data samples into a set of covering decision rules. They are compact and have the additional advantage that they can be converted into simple classification rules. In addition, they can be easily converted into Structured Query language (SQL) statements used for accessing databases, and achieve comparable or better classification accuracy than other classification methods (US# 2002/0133328, Section [0566]).


Billet encompasses the same ideas regarding forecasting (Abstract, Col. 1, Section [0001], Col. 1 Section [0006]), time (Col 15, Claim 15(a-d)) and decision-trees (Col. 2, Sect. [0018]), but does not take into consideration the same ideas as Cohen et al when it comes to the servers. Bowman-Amuah discusses the use of decision-trees, databases (Col 6, Section [0089]), data mining (Col. 7, Section [0109], Col. 33, Section [0554]), servers (Col. 3, Section [0047]), time (Col. 34. Section [0567]) and decision-trees (Col 34, Section [0566]). He does not go into a lot of detail regarding forecasting. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Billet to include more defined information regarding the servers as taught by Bowman-Amuah.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phyllis A. Daniels-Mendez whose telephone number is 571-272-7657. The examiner can normally be reached on 8:00 a.m. - 4 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Weiss can be reached on 571-272-6812. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PDM



DENNIS RUHL
PRIMARY EXAMINER